

REMARKS

Sir:

In response to the Official Action dated March 8th 2007 (for which a three-month extension of time is respectfully requested), please amend the above-identified application as follows:

IN THE SPECIFICATION:

Please add the following paragraph, beginning at page 1.

Related Applications

This application claims priority from application serial number PCT/US02/35163, filed November 4th 2002.

In the specification, paragraphs [0001] through [0002], [0004] through [0008], [0012] through [0017], [0019] through [0020], [0024] through [0025], [0035] and [0041] have been amended to correct minor editorial problems.

IN THE CLAIMS:

Please substitute the following amended claims 1-30 for corresponding claims previously presented. Please add claims 31-36.

The Examiner required amendment of the abstract. Attached to this amendment is the amended abstract.

The Examiner required an amendment to the first sentence claiming priority to the prior application No. PCT/US02/3516. The applicant notes that this prior application is cited in the declaration and the application transmittal letter therefore petition under 37 CFR 1.78 (a) is not required. The amendment is provided as requested.

Claims 1-30 stand objected to noting informalities. These informalities are corrected by amendment. In particular, the antecedent basis objections raised with respect to claims 8,19,20,27,29, and 30 are remedied by amendment. In particular, the word "said" is replaced with the word "the" throughout the claims. Furthermore, the amendment, "a single extension tube" provided in claim 19 remedies the antecedent basis objections to claims 25 and 26, these claims have been amended to depend from claim 22. Withdrawal of the objection to claims 1-30 are respectfully requested.

Claims 1-30 stand rejected under 35 USC §102(e) as being anticipated by Ash. This rejection is respectfully traversed.

Ash shows first and second clamps for occluding first and second pigtail extension tubes of a catheter. Respectfully, the invention of Ash cannot provide the sequential flushing function of the presently claimed invention. However, independent claims 1, 8 and 19, 27, 29 and 30 have been amended to provide greater clarity. In particular in claim 1 is amended to provide “a single extension tube”. This is not intended to limit the claims to catheters having only a single extension tube but rather to further clarify that the “progressive” and/or “sequential” volume reduction and/or flushing function of the invention is achieved using “a single extension tube”. Claims 8, 19, 27, 29 and 30 are similarly amended.

The Examiner contends that that the specification fails disclose the volume reducer configured to reduce the volume within the tube by a plurality of discrete volumes and the mixture defining a predetermined concentration of at least one antimicrobial and anticoagulant. The applicant respectfully disagrees. Paragraph [0015] reads “The system also includes a volume reducer, which is configured to induce a reduction in the volume of flush solution within the lock system. In the presently preferred embodiment the reducer is configured for progressively reducing the internal volume of the tubing system at a plurality of different times to displace a plurality of fractions of the residual volume into the indwelling portion of the catheter to intermittently flush the indwelling portion with the flush solution. The activation of the volume reducer preferably and/or its elements reduces the volume within the tubing system by at least one discrete volume. Preferably a plurality of activations of the volume reducer,

and/or its elements, reduces the volume within said tubing system by plurality discrete volumes
at a plurality of different times to provide intermittent flushing of said catheter portion over a
prolonged time interval”. (Emphasis added)

In addition Paragraph [0025] “According to another aspect of the present invention
comprises a system for maintaining at least one of the patency and sterility of the lumen of a
catheter the system within a blood vessel the blood vessel containing flowing blood. The lumen
defines a distal end within the blood vessel. The system contains a flush solution mixture of a
diluent, such as saline, and at least one of an antimicrobial and anticoagulant stored in a fluid
locked reservoir, such as a tubing system, in fluid communication with a blood vessel through a
lumen...” (Emphasis added). Although it is contended that such a mixture would have a
predetermined concentration the phrase “defining a predetermined concentration” is deleted from
the claim to facilitate early allowance.

By this amendment new Clams 31-36 have been added.

The remaining amendments presented herein serve to effect minor editorial corrections.

Claims 1, 5-26, 29 and 30 stand rejected on the grounds of nonstatutory obviousness-type double patenting. Without conceding the basis for this rejection, out of abundance of caution, and to facilitate allowance, the applicant is submitting herewith a Terminal Disclaimer with respect to U.S. Patent No. 6,689,109. Entry of this Terminal Disclaimer is respectfully requested.

Amendment to the Drawings:

The attached sheets of drawings include changes to Fig. 5 and Fig. 7. The first sheet, which includes Figures 5-6, replaces the original sheet including Figures 5-6. In Figure 5, element 229 has been changed to 204, element 270 has been changed to 208, element 235 has been changed to 206, and previously omitted element 220 has been added.

The second sheet, which includes Fig. 7, replaces the original sheet including Fig. 7. In Fig. 7, previously omitted element 405 has been added in addition to a new dotted line region which the new element 405 references.

Appl. No. 10/533,749
Amdt. Dated 9/5/2007
Reply to Office Action of 3/8/2007

Attachments: Replacement Sheets

Annotated Sheets Showing Changes

It is respectfully submitted that this application is now in condition for allowance. Should the Examiner believe that anything further is desirable in order to place the application in even better form for allowance, he is respectfully urged to telephone the applicant at the below-listed number.

Respectfully submitted,

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Date: September 5, 2007

Annotated Sheet Showing Changes

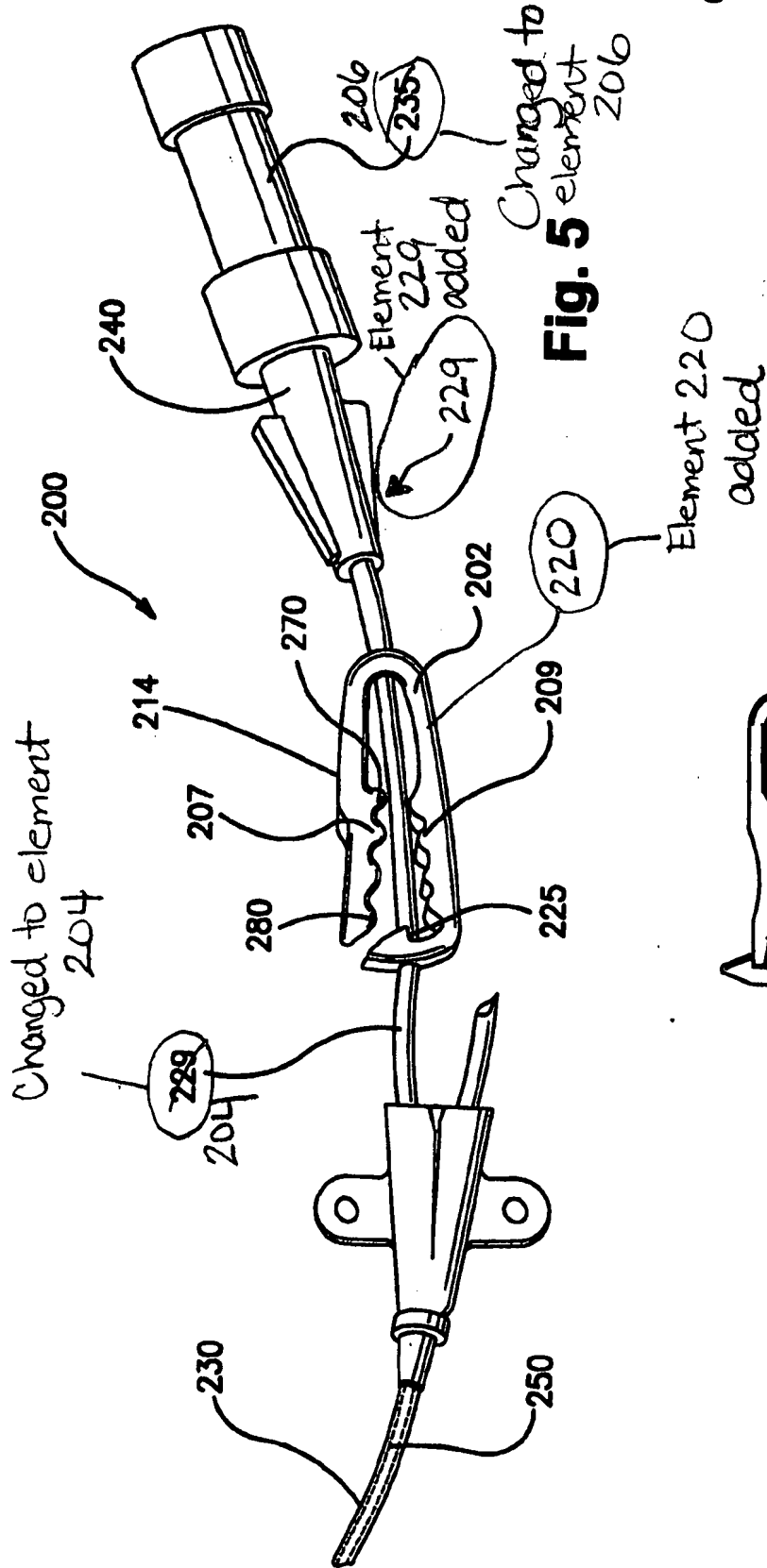
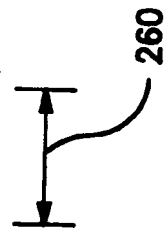


Fig. 5



Fig. 6



Annotated Sheet Showing Changes

